

What is claimed is:

5 0021050-00001
1. A method for suppressing gene expression in a eukaryotic cell comprising, transforming said cell with a recombinant construct comprising, a promoter functional in said cell operatively linked to a sense nucleotide sequence of a gene to be suppressed, wherein nucleus-to-cytoplasm transport of transcription products of said construct is inhibited.

2. The method of claim 1, wherein said inhibition of nucleus-to-cytoplasm transport is due to a lack of a normal 3' UTR.

3. The method of claim 1, wherein said inhibition of nucleus-to-cytoplasm transport is due to a lack of a 3' terminal sequence.

4. The method of claim 1, wherein said construct further comprises at least one self cleaving ribozyme.

5. The method of claim 1, wherein said promoter is selected from the group consisting of a constitutive promoter, an inducible promoter, a tissue specific promoter, and a developmentally regulated promoter.

6. The method of claim 1, wherein said construct further comprises at least one additional sense nucleotide sequence of at least one additional gene operatively linked to said promoter.

7. A method for suppressing gene expression in a eukaryotic cell comprising, transforming said cell with a recombinant construct comprising, a promoter functional in said cell operatively linked to a plurality of antisense nucleotide sequences of a gene or genes to be suppressed,

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wherein nucleus-to-cytoplasm transport of transcription products of said construct is inhibited.

8. The method of claim 7, wherein said inhibition of nucleus-to-cytoplasm transport is due to a lack of a normal 3' UTR.

9. The method of claim 7, wherein said inhibition of nucleus-to-cytoplasm transport is due to a lack of a 3' terminal sequence.

10. The method of claim 7, wherein said construct further comprises at least one self cleaving ribozyme.

11. The method of claim 7, wherein said promoter is selected from the group consisting of a constitutive promoter, an inducible promoter, a tissue specific promoter, and a developmentally regulated promoter.

12. A method for suppressing expression of a gene in a plant cell, comprising transforming said plant cell with a recombinant construct comprising, a promoter functional in said plant cell, and an antisense nucleotide sequence for the gene to be suppressed, wherein nucleus-to-cytoplasm transport of transcription products of said construct is inhibited.

13. The method of claim 12, wherein said inhibition of nucleus-to-cytoplasm transport is due to a lack of a normal 3' UTR.

14. The method of claim 12, wherein said construct further comprises at least one self cleaving ribozyme.

15. The method of claim 12, wherein said promoter is selected from the group consisting of a constitutive

promoter, an inducible promoter, a tissue specific promoter, and a developmentally regulated promoter.

16. A recombinant vector comprising, a promoter functional in a eukaryotic cell operatively linked to a nucleotide sequence selected from the group consisting of:

- a) at least one sense nucleotide sequence of at least one gene to be suppressed,
- b) a plurality of antisense nucleotide sequences of at least one gene to be suppressed, and
- c) at least one antisense nucleotide sequence for at least one gene to be suppressed;

wherein nucleus-to-cytoplasm transport of transcription products of said at least one nucleotide sequence is inhibited.

17. The recombinant vector of claim 16, wherein said inhibition of nucleus-to-cytoplasm transport is due to a lack of a normal 3' UTR.

18. The recombinant vector of claim 16, wherein said construct further comprises at least one self cleaving ribozyme.

19. The recombinant vector of claim 16, wherein said promoter is selected from the group consisting of a constitutive promoter, an inducible promoter, a tissue specific promoter, and a developmentally regulated promoter.

20. A host cell comprising the recombinant vector of claim 16.

21. A eukaryotic cell whose genome includes a recombinant construct comprising, a promoter functional in said eukaryotic cell operatively linked to at least one sense nucleotide sequence of at least one gene to be

5 suppressed, wherein nucleus-to-cytoplasm transport of transcription products of said construct is inhibited.

22. The eukaryotic cell of claim 21, wherein said inhibition of nucleus-to-cytoplasm transport is due to a lack of a 3' terminal sequence.

23. The eukaryotic cell of claim 21, wherein said inhibition of nucleus-to-cytoplasm transport is due to a lack of a normal 3' UTR.

24. The eukaryotic cell of claim 21, wherein said construct further comprises at least one self cleaving ribozyme.

25. The eukaryotic cell of claim 21, wherein said promoter is selected from the group consisting of a constitutive promoter, an inducible promoter, a tissue specific promoter, and a developmentally regulated promoter.

26. A plant comprising at least one cell of claim 21.

27. A eukaryotic cell whose genome includes a recombinant construct comprising, a promoter functional in said eukaryotic cell operatively linked to a plurality of antisense nucleotide sequences of at least one gene to be suppressed, wherein nucleus-to-cytoplasm transport of transcription products of said construct is inhibited.

28. The eukaryotic cell of claim 27, wherein said inhibition of nucleus-to-cytoplasm transport is due to a lack of a normal 3' UTR.

29. The eukaryotic cell of claim 27, wherein said inhibition of nucleus-to-cytoplasm transport is due to a lack of a 3' terminal sequence.

30. The eukaryotic cell of claim 27, wherein said construct further comprises at least one self cleaving ribozyme.

31. The eukaryotic cell of claim 27, wherein said promoter is selected from the group consisting of a constitutive promoter, an inducible promoter, a tissue specific promoter, and a developmentally regulated promoter.

32. A plant comprising at least one cell of claim 27.

33. A plant cell whose genome includes a recombinant construct comprising, a promoter functional in said plant cell operatively linked to at least one antisense sequence for at least one gene to be suppressed; wherein nucleus-to-cytoplasm transport of transcription products of said construct is inhibited.

34. The plant cell of claim 33, wherein said inhibition of nucleus-to-cytoplasm transport is due to a lack of a normal 3' UTR.

35. The plant cell of claim 33, wherein said inhibition of nucleus-to-cytoplasm transport is due to a lack of a 3' terminal sequence.

36. The plant cell of claim 33, wherein said construct further comprises at least one self cleaving ribozyme.

37. The plant cell of claim 33, wherein said promoter is selected from the group consisting of a constitutive promoter, an inducible promoter, a tissue specific promoter, and a developmentally regulated promoter.

38. A plant comprising at least one cell of claim 33.

40. The progeny of the plant of claim 38.